205. Some parties argue that the regulatory parity objectives of the statute require the broader elimination of restrictions on Part 22 as well as Part 90 services. Bell Atlantic, CTIA, GTE, and McCaw note that our PCS rules allow licensees to provide both CMRS and PMRS offerings under a single license, and argue that all CMRS licensees, including cellular operators, should have the same flexibility.[385] McCaw believes that the permissible uses of cellular, ESMR, and PCS should be conformed so that licensees in these services can compete on an equal footing.[386] CTIA also observes that cellular providers are subject to resale obligations that are not imposed on other mobile service providers.[387]

**(2) *Discussion***

206. The Budget Act requires us to eliminate use restrictions that conflict with the revised statutory classification of mobile services or with the goal of symmetrical regulation for substantially similar CMRS services. To this end, we adopt our proposal to delete the Part 90 restriction on common carrier communications as it applies to SMR, 220 MHz, Business Radio, and Part 90 paging services. This restriction conflicts with Section 332 because under the statute, CMRS providers in these services are providing common carrier service by definition. Thus, we affirm that licensees in these services may provide either CMRS or PMRS offerings.[388] We will, however, continue to prohibit common carrier communications in other Part 90 services, which are restricted to PMRS offerings only.

207. We will also exempt Part 90 CMRS providers from the requirement that permissible communications be related to the activities that make the licensee eligible in the service.[389] CMRS licensees are subject to the common carrier obligation to serve the public under Section 201 of the Act. Thus, they may not restrict use of their facilities based on the purpose of the communication. In addition, the restriction serves no practical purpose in the CMRS context because eligibility for CMRS is not restricted to specialized classes of radio users.[390] For similar reasons, we will not subject reclassified Part 90 licensees on exclusive

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[385] Bell Atlantic Reply Comments at 4; CTIA Comments at 6-7; GTE Comments at 4-6; McCaw Comments at 6-8.

[386] McCaw Comments at 8.

[387] CTIA Comments at 7.

[388] We intend to explore licensing procedures and rules for the case of combined CMRS and PMRS operation in a future proceeding. *See* Section III.E.11.b, *infra*.

[389] *See, e.g.*, 47 CFR §§ 90.405, 90.645, 90.733.

[390] *See CMRS Second Report and Order*, 9 FCC Rcd at 1441 (para. 68) (eligibility rules for all types of SMRs, commercial 220-222 MHz land mobile systems, and private carrier paging systems, include individuals as a category of eligible customers; end user eligibility is virtually unrestricted in Business Radio Service).

channels to the requirement that communications be of minimum duration, as their Part 22 counterparts are not subject to comparable restrictions. We will, however, retain this requirement for CMRS licensees on shared channels in order to maximize efficient use of spectrum by multiple licensees.

208. We also agree with commenters that Part 90 rules restricting interconnection in certain private radio services should not be applied to CMRS, which is by definition an interconnected service. Therefore, existing Part 90 rules that relegate interconnected service to secondary status, limit types of interconnection, or otherwise place conditions on the provision of interconnection will not be applicable to CMRS providers. We conclude, however, that WJG's request to permit public coast stations to provide two-way land mobile radio service is beyond the scope of this proceeding. This issue does not involve a disparity between common carrier services and reclassified private services, because public coast stations were regulated as common carriers prior to the Budget Act. In any event, the issues raised by WJG are being addressed in a separate proceeding.[391]

209. Finally, we address the issue of whether all CMRS licensees, including cellular operators, should have the same flexibility as PCS licensees to provide both CMRS and PMRS offerings under a single license. First, we note that some of the regulatory parity concerns of common carrier commenters are mitigated by our decision in the *Part 22 Rewrite Order* to allow common carrier transmitters to be licensed for simultaneous non-common carrier uses.[392] With regard to the suggestion that Part 22 licensees should have the same flexibility as other CMRS licensees to provide PMRS offerings under their existing authorizations, this issue has been raised by petitioners seeking reconsideration of the *CMRS Second Report and Order*. We will address the issue in that proceeding. Similarly, we decline to address the issue of resale obligations for cellular or other CMRS providers in this proceeding, as these issues are being addressed in a separate docket.[393]

**e. Station Identification**

**(1) *Background and Pleadings***

210. In the *Further Notice*, we observed that both Part 90 and Part 22 require some form of station identification at regular intervals in most services, and requested comment on the circumstances under which these rules could be conformed or even eliminated. For example, noting that cellular and nationwide 220 MHz licensees are exempt from station identification requirements, we asked whether other CMRS services operating on a

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[391] Amendment of the Commission's Rules Concerning Maritime Communications, PR Docket No. 92-257, Notice of Proposed Rule Making and Notice of Inquiry, 7 FCC Rcd 7863 (1992).

[392] *Part 22 Rewrite Order*, at paras 67-71.

[393] *See CMRS Equal Access and Interconnection Notice.*

nationwide basis or in large, Commission-defined service areas should be similarly exempt. We tentatively concluded, however, that transmission of station identification might still be necessary for licensees operating in station-defined service areas because identification by other means would be more difficult.[394]

211. The *Further Notice* also sought comment on ways in which station identification rules we deem to be necessary could be made more consistent and less burdensome. Specifically, we proposed to adopt a general rule that all CMRS licensees operating multi-station systems be allowed to use a single system-wide call sign. We noted that such an approach had previously been proposed for all Part 22 services in the *Part 22 Rewrite Notice* and for wide-area SMR licensees in the *800 MHz EMSP Notice*. We also sought comment on whether all CMRS licensees should be allowed to transmit call signs digitally, as is currently allowed under Part 90.[395]

212. The comments generally support simplifying or eliminating station identification requirements for CMRS systems operating on exclusively licensed channels while retaining existing requirements for systems operating on shared channels. Brown argues that station identification should be eliminated on exclusive channels because it impedes services such as data transmission that rely on uninterrupted transmissions and because the identity of licensees on exclusive channels can be ascertained by other means.[396] Other comments support eliminating identification requirements for nationwide 900 MHz paging[397] and SMR systems.[398] Some parties would retain the station identification rules for traditional SMRs, but adopt rules paralleling those in the cellular service for wide-area SMRs.[399]

213. PCIA supports eliminating station identification requirements for exclusive channel licensees serving well-defined geographic regions as they can be easily identified through Commission records, or where prior coordination has taken place and station contours are a matter of public record.[400] Otherwise, PCIA would retain station identification requirements.[401] PageNet supports retention of the rule, particularly for shared channels, with

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[394] *Further Notice,* 9 FCC Rcd at 2880 (para. 81).

[395] *Id.* (paras. 80-82).

[396] Brown Comments at 15-16. *See also* RAM Tech Comments at 10-11.

[397] NABER Comments at 34.

[398] *Id.*; AMTA Comments at 16 (800 MHz SMRs).

[399] *E.g.*, Motorola Reply Comments at 15.

[400] PCIA Comments at 29. *See also* RAM Tech Comments at 10-11.

[401] PCIA Comments at 19-20.

some revisions.[402] E.F. Johnson also favors retention of some form of station identification requirements, arguing that such obligations are not overly burdensome because automatic equipment can be used to meet them.[403] RMR, a small SMR operator, believes that station identification requirements should be expanded, not relaxed.[404]

214. The overwhelming majority of parties commenting on the question favor using a single call sign instead of multiple call signs for commonly owned facilities.[405] US West generally favors standardization of station identification requirements for CMRS services.[406] With respect to the frequency and timing of call sign transmissions, NABER proposes hourly identification at the top of every hour.[407] RMR opposes NABER's proposal for an on-the-hour identification requirement, however, on the grounds that it would add to licensee costs with little corresponding benefit.[408] Other commenters favor requiring station identification every thirty minutes.[409]

215. Several parties support allowing digital transmission of call signs.[410] PageNet states that the parameters, in terms of format and data speed acceptable to the Commission, must be clearly defined.[411] PageNet adds that the Commission should take into account the

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[402] PageNet Comments at 28-29 (retention of station identification especially necessary for 900 MHz private carrier paging as these frequencies remain shared).

[403] E.F. Johnson Comments at 19.

[404] RMR Reply Comments at 12.

[405] AMTA Comments at 16; Brown Comments at 28-29; APACG Comments at 12; E.F. Johnson Comments at 19; Motorola Reply Comments at 2, 15-16. *See also* PCC Comments at 9 (favoring permitting a single call sign to be transmitted by an integrated system, optionally in a digital format, and extending that permission to networked, commonly operated, individually licensed systems).

[406] US West Comments at 9.

[407] *See e.g.*, NABER Comments at 34-35; PageNet Comments at 28-29. *See also* PCIA Comments at 19-20.

[408] RMR Reply Comments at 12. RMR states that this requirement would require a real time clock with a back up battery, whereas currently equipment is set for transmitting an identifier every 15 or 30 minutes.

[409] *See, e.g.*, Celpage Comments at 20.

[410] *Id.*; PageNet Comments at 29. *See also* Motorola Reply Comments at 2, 15-16.

[411] PageNet Comments at 29.

time necessary to reconfigure hardware to comply with any new station identification requirements.[412]

**(2) *Discussion***

216. We conclude that CMRS licensees operating on an exclusive basis in Commission-defined service areas should generally be exempt from station identification requirements. Specifically, we will apply this rule to nationwide paging licensees and MTA-based SMR licensees.[413] Commenters generally support our view that such licensees can readily be identified based on service area information contained in the Commission's licensing records and other publicly available sources. Elimination of station identification requirements in such instances also furthers the goal of regulatory symmetry by ensuring that similarly situated CMRS licensees will be treated consistently.

217. We will continue to require station identification in the case of all other CMRS systems, whether they are licensed exclusively on a station-by-station basis or licensed on shared channels. The record indicates that for these systems, call sign transmission continues to be essential for licensee identification because licensees cannot readily be identified by reference to known geographic boundaries. Therefore, identification will be required for SMR (other than MTA-based systems), local 220 MHz, non-nationwide paging, Business Radio, and all non-cellular Public Land Mobile service.

218. Where CMRS licensees remain subject to station identification requirements, we will permit use of a single call sign instead of multiple call signs for commonly owned facilities. This rule is an extension of our recent decision in the *Part 22 Rewrite Order* to allow all Part 22 licensees to use single call signs for multiple-station systems.[414] It will permit more efficient use of air time without compromising the needs of other users or Commission personnel to identify the licensee. We also adopt NABER's proposal that station identification occur on the hour; this will facilitate identification of an interfering signal by providing a defined period for call sign transmission, while reducing additional identification requirements imposed on licensees. Accordingly, CMRS licensees subject to identification requirements will transmit their call signs some time between five minutes before and five minutes after each hour. Should a continuous transmission prevent compliance, the licensee must transmit its identification as soon as the transmission is complete.

219. Finally, we will permit all CMRS licensees on exclusive channels to transmit call signs digitally, as is currently provided in Part 90. Digital call sign transmission will

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[412] *Id.*

[413] We will address identification and other operational requirements for PCS in a proceeding we intend to initiate shortly.

[414] *See* 47 CFR § 22.313(c)(3).

greatly reduce the burden of the call sign requirement for CMRS systems providing digital service. To use a digital call sign, the licensee must provide the Commission with information sufficient to decode the digital transmission and ascertain the call sign transmitted. We will not, however, permit licenses on shared channels to transmit their call signs digitally. Our experience with licensees who experience interference on a shared channel indicates that they would not be able to identify the source of such interference based on a digital call sign transmission.

### f. General Licensee Obligations

#### (1) *Background and Pleadings*

220. Part 22 and Part 90 both contain rules on licensee management and control of station facilities,[415] the retention of station licenses,[416] station inspections,[417] and responses to official communications.[418] On the whole, these rules are quite similar, although minor variations between Part 90 and Part 22 exist. We therefore proposed in the *Further Notice* to retain these rules with minor modifications to eliminate inconsistency and redundancy.[419]

221. Commenting parties agree in principle that general licensee obligations should be conformed. US West and Bell Atlantic, for example, argue generally that these rules should be standardized.[420] Others have particular concern for conforming the rules governing management contracts and station control. Some, including both Part 22 and Part 90 licensees, argue that Part 22 management contract rules should be revised to reflect our current Part 90 rules, as the latter are more flexible.[421] Bell Atlantic argues that because we

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[415] Part 90 licensees are responsible for proper operation of their stations, are expected to provide observations, servicing, and maintenance by certified persons as often as is necessary, and must have and maintain control over their authorized stations. *See* 47 CFR §§ 90.403, 90.433, 90.656. Public land mobile and cellular licensees must exercise effective operational control over the radio facilities and their operation, and are responsible as well for mobiles temporarily associated with their systems *See* 47 CFR §§ 22.305, 22.927.

[416] 47 CFR § 90.437; 47 CFR § 22.303.

[417] 47 CFR § 90.439; 47 CFR § 22.301.

[418] 47 CFR § 90.437; 47 CFR § 22.315.

[419] *Further Notice*, 9 FCC Rcd at 2880-81 (para. 83). In the *Refarming Notice*, we proposed to delete many of these rules in Part 90 on the grounds that they are redundant or unnecessary for most private land mobile licensees. *See Refarming Notice*, Appendix E.

[420] US West Comments at 9; Bell Atlantic Comments at 13.

[421] McCaw Comments at 30-31; NABER Comments at 35; PCIA Comments at 20.

have not imposed operational rules governing control and maintenance of mobile stations on PCS providers, we should eliminate such rules for all CMRS providers.[422]

222. New Par, however, argues that Part 22 management contract rules should apply to reclassified Part 90 providers.[423] Southern opposes New Par's proposal, arguing instead that this issue should be examined more thoroughly in a service-specific context.[424] Southern also recommends incorporating the Part 90 revisions proposed in the *Refarming Notice* into this rule making.[425]

(2) *Discussion*

**(a) Posting of Station Licenses**

223. Currently, Part 90 licensees must provide photocopies of station authorizations, including special temporary authorizations, at every control point of the station.[426] In contrast, Part 22 licensees may make available either a photocopy of the authorization at each regularly attended control point of the station, or an address or location where the licensee's current authorization may be found.[427] We adopt the Part 22 approach, which provides licensee flexibility without compromising regulatory and informational requirements.

**(b) Station Inspections**

224. The Part 22 and Part 90 rules for station inspections are very similar. Both require that a station and its records be available for inspection by an FCC representative at any reasonable hour.[428] Part 90, however, makes explicit that inspections are limited to "authorized" FCC representatives, and limits inspection to a "reasonable request."[429] These requirements are implicit in the Part 22 rules, and for the purpose of clarity, we here also make them explicit in Part 22.

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[422] Bell Atlantic Comments at 6.

[423] New Par Comments at 13-15.

[424] Southern Reply Comments at 9.

[425] Southern Comments at 10.

[426] 47 CFR § 90.437. A "control point" is any place from which a transmitter's functions may be directed. 47 CFR § 90.7.

[427] 47 CFR § 22.303.

[428] 47 CFR § 90.439; 47 CFR § 22.301.

[429] 47 CFR § 90.439.

### (c) Official Communications

225. The Commission mails official communications to licensees for a number of reasons, including notifying licensees of rule or statutory violations, apprising licensees of the necessity of completing certain forms, and responding to official surveys. The Part 22 and Part 90 rules governing licensees' responses to these communications have some similar requirements.[430] Part 22 also expressly requires that a licensee promptly respond to official communications other than a notice of rule violation.[431] For the sake of conformity, we extend this approach to Part 90 licensees. We also provide, for all Part 90 and Part 22 licensees, that for official communications other than a notice of a rule or statutory violation, the licensee must respond within the time limit specified in the correspondence.

### (d) Station Management and Control

226. We agree with commenters that the rules regarding station management and control should be conformed to ensure consistent treatment of all CMRS providers. We also note that the existing rules are already highly similar,[432] as they stem from the prohibition in Section 310(d) of the Communications Act against unauthorized transfers of control by all Commission licensees.[433] To promote regulatory consistency, we will extend the language of the current Part 22 rule to all CMRS providers. As some commenters note, however, our interpretation of these rules has varied in the context of specific common carrier and private radio services, particularly on the issue of management contracts.[434] We believe the

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[430] Part 22 and Part 90 both require that persons receiving official notice of violation of a rule, statute, international agreement, Executive Order, or regulation must respond within 10 days; that if such a response cannot be made within 10 days, the licensee must acknowledge receipt of the letter and explain its reasons for the delay; and that responses must be complete and self-contained without reference to other communications. 47 CFR § 90.449; 47 CFR § 22.315.

[431] 47 CFR § 22.315.

[432] 47 CFR § 90.403; 47 CFR § 22.305. Part 22 (for cellular licensees) and Part 90 (for SMR licensees) also require that a licensee exercise effective operational control over mobile stations with which it communicates. 47 CFR § 90.656; 47 CFR § 22.927.

[433] *See* Lorain Journal Co. v. F.C.C., 351 F.2d 824, 828 (D.C. Cir. 1965), *cert. denied*, 383 U.S. 967 (1966) (*Lorain Journal*) (Section 310(d) the statutory basis for Commission's rules on station control); Telephone and Data Systems, Inc. v. F.C.C., 19 F.3d 42, 46 (1994) (applying *Lorain Journal* to Part 22 licensees); Applications of Motorola, Inc., File No. 507505, Order, para. 14 (July 30, 1985), announced by FCC News Release No. 6440 (Aug. 15, 1985) (applying *Lorain Journal* to Part 90 licensees).

[434] *Compare* Intermountain Microwave, 24 Rad. Reg. 983 (1963) (six-prong test of control for common carrier services) *and* Applications of Motorola, Inc., File No. 507505, Order, para. 14 (July

(continued...)

application of our station control rules to management contracts in specific services should be explored further. In our *Second Further Notice* in this docket, we have sought comment on whether certain types of CMRS management contracts should be considered attributable interests for spectrum cap purposes even if they do not cause the manager to have *de facto* control of the facilities. In that proceeding, we will also address whether our interpretation of the rules regarding CMRS management contracts should be further conformed or modified.

### g. Equal Employment Opportunities

#### (1) *Background and Pleadings*

227. In the *Further Notice*, we sought comment on extending our existing equal employment opportunity (EEO) rules, which are currently applicable to all Public Mobile Service licensees under Part 22, to all CMRS providers.[435] The *Further Notice* also asked whether the current exemption from EEO filing requirements for licensees with fewer than 16 employees provided sufficient flexibility for small business licensees that would be newly subject to EEO rules.[436]

228. Nearly all commenting parties who expressly address our proposal agree in principle that EEO requirements currently applicable to common carriers should extend to all CMRS providers.[437] Comments varied, however, regarding whether the exemption from filing requirements for licensees with fewer than 16 employees will provide sufficient flexibility for reclassified Part 90 licensees. NABER, for example, recommends increasing the minimum number of employees allowed under the small business exemption to 25 on the grounds that many small SMR providers who employ more than 16 persons will encounter undue record keeping and reporting costs.[438] PCIA also recommends that the 16-employee benchmark be revisited.[439] Celpage, Metrocall, and RAM Tech, while supporting the 16-employee standard, recommend an ''amnesty period'' following adoption of the rules to

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[434](...continued)
30, 1985), announced by FCC News Release No. 6440 (Aug. 15, 1985) (test of control for SMR services).

[435] *Further Notice*, 9 FCC Rcd at 2881 (para. 85).

[436] *Id.*

[437] *See, e.g.*, Bell Atlantic Comments at 13; BellSouth Comments at 20; NABER Comments at 36; Nextel Comments at 43; Celpage Comments at 20-21.

[438] NABER Comments at 35-36.

[439] PCIA Comments at 20-21.

allow reclassified Part 90 licensees sufficient time to file EEO reports and to otherwise adapt to the new requirements.[440]

229. Other commenters do not believe that the number of licensees covered by the small business exemption should be expanded. New Par suggests there is no need to distinguish between small business Part 22 and Part 90 licensees. New Par also argues that private land mobile licensees who will continue to be regulated as private service providers until August 10, 1996 will have sufficient time to implement procedures to comply with EEO rules.[441] RMD suggests that the policy goals of the EEO rules arise from being a recipient of federal licensing benefits rather than from the regulatory classification of a particular entity. Accordingly, RMD suggests that consideration be given to applying EEO requirements to all land mobile licensees whether they are classified as CMRS or PMRS.[442]

230. Finally, Dial Page proposes that instead of extending EEO requirements to all CMRS, we eliminate their applicability to common carriers. Dial Page argues that the rationale for imposing EEO requirements on broadcast and cable -- *i.e.*, to promote diversity in programming -- does not apply to common carriers.[443] Dial Page also contends that requiring common carriers to file EEO reports with the Commission serves no useful purpose and that EEO enforcement should instead be left to the EEOC and applicable state and local human rights commissions.[444]

**(2) *Discussion***

231. We agree with most of the commenters that we should have EEO rules for all CMRS providers. We believe that EEO rules for CMRS providers will further the statutory purpose embodied in section 309(j) of the Communications Act regarding minorities and women. Specifically, section 309(j)(4)(D) provides that the Commission should "ensure that . . . businesses owned by members of minority groups and women are given the opportunity to participate in the provision of spectrum-based services . . . ."[445] Although Congress enacted this statutory provision in the context of the Commission's implementation of its new competitive bidding authority, the provision also reflects a broad congressional mandate that

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[440] *See, e.g.*, Celpage Comments at 20-21; Metrocall Comments at 20; Network Comments at 20; RAM Tech Comments at 19-20.

[441] New Par Comments at 15.

[442] RMD Comments at 11.

[443] Dial Page Reply Comments at 9 (*citing* NAACP v. FPC, 425 U.S. 662, 670 n.7 (1976)).

[444] *Id.* at 9-10.

[445] 47 U.S.C. § 309(j)(4)(D).

properly may be implemented through our broad authority under sections 4(i) and 303(r) of the Act to adopt such rules as may be necessary to carry out the Act's provisions.[446]

232. EEO rules for CMRS providers are appropriate and necessary to achieve the statutory goal of increased ownership opportunities for minorities and women in spectrum-based services. By having EEO rules that apply to all CMRS providers, we will provide increased communications experience for minorities and women. This experience will, in turn, enable them more easily to become owners of communications enterprises.

233. In implementing section 309(j) in the CMRS context (narrowband PCS), we have already recognized the important role that employment opportunities for minorities and women can play in expanding ownership opportunities for these groups: In the *Third Report and Order* in our competitive bidding proceeding, we stated that "our EEO rules enhance access by minorities and women to increased employment opportunities, which are the foundation for increasing opportunities for minorities and women in all facets of the communications industry, including participation in ownership."[447] Congress has also recognized the relationship between EEO rules and increasing ownership opportunities for minorities and women: "the Committee recognizes that a strong EEO policy is necessary to assure sufficient numbers of minorities and women gain professional and management level experience . . . , and thus that significant numbers of minorities and women obtain the background and training to take advantage of existing and future . . . ownership opportunities."[448]

234. Because our CMRS rules further an explicit statutory objective contained in the Communications Act, our authority to adopt them is not constrained by the Supreme Court's decision in *NAACP v. FPC*.[449] In that case, the Court held that the Federal Power Commission had no authority to adopt EEO rules for its regulatees based on its broad

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[446] 47 U.S.C. §§ 154(i), 303(r).

[447] Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, PP Docket No 93-253 Third Report and Order, FCC 94-98, at 31 n.41 (released May 10, 1994) (quoting Implementation of the Commission's Equal Opportunity Rules, MM Docket No. 94-34, Notice of Inquiry, 9 FCC Rcd 2047 (1994)). *See also* Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, PP Docket No 93-253, Fourth Report and Order, 9 FCC Rcd 2330, 2337 n.67 (1994)(same quotation in the context of the Interactive Video Data Service); Standards for Assessing Forfeitures for Violations of the Broadcast EEO Rules, Policy Statement, 9 FCC Rcd 929, 929-30 (1994), *petitions for recon. pending* ("EEO rules enhance access by minorities and women to increased employment opportunities. Increased employment opportunities are the foundation for increasing opportunities for minorities and women in all facets of the communications industry, including participation in ownership.").

[448] H.R. Rep. No. 628, 102d Cong., 2d Sess. 114 (1992) (discussing broadcast EEO rules).

[449] NAACP v. FPC, 425 U.S. 662 (1976).

"public interest" authority where EEO rules did not further the purposes of the underlying statutes.[450] Here, in contrast, our EEO rules further the statutory purpose set forth in section 309(j) of the Communications Act and are thus fully consistent with the *NAACP* decision. Indeed, our authority to adopt EEO rules for CMRS licensees to further the statutory objective of ensuring increased ownership opportunities for minorities and women is analogous to our authority to adopt broadcast EEO rules to further the statutory goal of viewpoint diversity, which the Supreme Court explicitly upheld in *NAACP*.[451]

235. We also conclude that we should retain the exemption from EEO filing requirements for licensees with fewer than 16 employees. We agree with Celpage and other commenting parties that the 16-employee benchmark sufficiently eases paperwork burdens for small businesses.[452] We also find no evidence in the record that Part 22 licensees who do not qualify for the exemption have faced an inordinate paperwork burden from being required to file EEO reports. We therefore decline to expand the scope of the exemption beyond its current level. Finally, we note that even for those smaller licensees not exempt from filing requirements, Part 22 rules provide us discretion in accounting for a licensee's size and location in determining whether its EEO program satisfies Commission rules.[453]

236. We also do not adopt RMD's suggestion to apply EEO requirements to licensees other than CMRS providers. Our purpose here is not to eliminate regulatory differences between commercial and noncommercial services, but is to eliminate regulatory inconsistencies between reclassified Part 90 services and substantially similar common carrier services. Consequently, RMD's proposal is beyond the scope of this proceeding.

237. Finally, we conclude that no special "amnesty period" for reclassified Part 90 licensees to comply with these rules is necessary. The Budget Act already provides for a transition period for grandfathered Part 90 licensees until August 10, 1996,[454] which we will apply to the EEO requirements adopted for CMRS providers in this Order. Consequently, these licensees have two years from the date of this order to come into compliance with our EEO rules, and such licensees will not be required to file their initial EEO reports until May

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[450] *Id.* at 669-70.

[451] *Id.* at 670 n.7.

[452] *See, e.g.*, Celpage Comments at 20.

[453] The rules expressly provide that a program reasonably take steps to assure nondiscrimination to the extent appropriate in terms of a licensee's size and location. *See* 47 CFR § 22.321(a)(2); Rule Making To Require Communications Common Carriers To Show Nondiscrimination in Their Employment Practices, Docket No. 18742, Report and Order, 24 FCC 2d 725, 729 (para. 10) (1970).

[454] Specifically, licensees providing private land mobile services as of August 10, 1993, and paging services utilizing frequencies allocated as of January 1, 1993 for private land mobile services will be regulated as PMRS until August 10, 1996. Budget Act, § 6002(c)(2)(B).

31, 1997. Even for new licensees not entitled to the two-year transition period, we believe that there is sufficient time to come into compliance with these requirements by the time the rules become effective. The initial EEO filing requirement for non-grandfathered licensees is not due until May 31, 1995. In addition, in evaluating a licensee's or permittee's compliance with EEO requirements, we will apply the rules prospectively only, taking into account the amount of time the licensee has been subject to the new rules.[455] We believe that these factors will afford licensees ample time and flexibility to conform to these requirements.

## D. SPECTRUM AGGREGATION LIMIT

### 1. *Spectrum Caps Generally*

#### a. Background and Pleadings

238. In this Order, we are capping at 45 MHz the total amount of combined PCS, cellular, and SMR spectrum classified as CMRS in which an entity may have an attributable interest in any geographic area at any point in time. We are adopting this cap as a minimally intrusive means of ensuring that the mobile communications marketplace remains competitive and retains incentives for efficiency and innovation. This cap applies only to PCS, SMR, and cellular uses meeting the definition of CMRS. Because the public interest considerations embodied by this cap may apply to PCS, SMR, and cellular uses meeting the definition of PMRS, we will seek comment in the near future on a proposal to broaden the cap we are adopting today to include such uses.

239. In the *Further Notice*, the Commission directed attention to a possible gap in our current rules limiting aggregation of wireless spectrum, the basic resource needed and used by all wireless service providers. Such restrictions seek to promote diversity and competition in mobile services, by recognizing the possibility that mobile service licensees might exert undue market power or inhibit market entry by other service providers if permitted to aggregate large amounts of spectrum. Thus, in other proceedings we set limits on the aggregation of broadband spectrum that will be used for specific CMRS services: 40 MHz of PCS spectrum (10 MHz for in-region cellular providers for 5 years and 15 MHz thereafter) and 25 MHz of cellular spectrum in any geographic area.[456] Licensees are effectively limited to a total of 300 kHz of narrowband PCS spectrum in any area.[457]

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[455] *See generally* Implementation of Section 22 of the Cable Television Consumer Protection and Competition Act of 1992 -- Equal Employment Opportunities, MM Docket No. 92-261, Report and Order, 8 FCC Rcd 5389, 5399 (para. 49 n.155) (1993) (codified at 47 CFR §§ 76.71-76.79).

[456] *Broadband PCS Reconsideration Order*, at para. 67; 47 CFR § 22.942.

[457] The specific limitation is a maximum of three 50 kHz channels, paired or unpaired (*i.e.*, no more than 150 kHz paired with 150 kHz). *Narrowband PCS Order*, 8 FCC Rcd at 7168 (para. 34).

240. The Commission has not adopted a general cap on the amount of spectrum that an entity may use to provide CMRS. As the *Further Notice* explained, however, an overall CMRS spectrum cap might be justified, given the flexible regulatory environment we have created for CMRS that facilitates competition among holders of different types of licenses.[458] We were concerned that excessive aggregation by any one or several CMRS licensees could reduce competition by precluding entry by other service providers and might thus confer excessive market power on incumbents. The *Further Notice* sought to balance concern for the number of competitors against the benefits of economies of scale and scope.

241. To address these concerns, the *Further Notice* tentatively concluded that if we decide that some form of cap should be established, then the cap should be comparable to our existing limits on broadband PCS and PCS-cellular aggregation.[459] The *Further Notice* proposed a 40 MHz limit on CMRS spectrum in a geographic area applied to all CMRS services. We sought comment on whether this limit should be adjusted upward slightly to allow reasonable flexibility for existing mobile service providers to provide both broadband and narrowband services.[460] We also requested comment on various subsidiary spectrum cap issues, including the spectrum and services that should be included under a cap,[461] the geographic service area to be encompassed in setting a cap,[462] and standards for attribution of ownership interests in CMRS for purposes of determining how the cap would apply to a given entity.[463]

242. A majority of the commenters oppose a general CMRS spectrum cap, at least at this time. Of the 40 commenters addressing the issue, 29 oppose adopting a spectrum cap.[464]

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[458] *Further Notice*, 9 FCC Rcd at 2882 (para. 89).

[459] *Id.* (para. 92).

[460] *Id.* at 2883 (para. 93).

[461] *Id.* at 2883-84 (paras. 94-98).

[462] *Id.* at 2884 (paras. 99-100).

[463] *Id.* (paras. 101-102).

[464] *See, e.g.*, AirTouch Comments at 7; AMTA Comments at 28-30; Bell Atlantic Comments at 8-9; BellSouth Comments at 2; CellCall Reply Comments at 12; CTIA Comments at 3; Century Comments at 2-4; Comcast Comments at 2-3; Constellation Comments at 2-4; Dial Page Comments at 2-4; GTE Comments at 18-21; LQP Comments at 2-6; McCaw Comments at 5; Motorola Comments at 2-3; NTCA Reply Comments at 2; Nextel Comments at iii; NYNEX Comments at 4; OneComm Comments at 8; Pacific Reply Comments at 2; Pagemart Comments at 3-5, 10; PageNet Comments at 47-48; PCIA Comments at 7-9; Pittencrieff Comments at 15-16; PRTC Reply Comments at 1-3; Radiofone Reply Comments at 1; RMD Comments at 14; Roseville Comments at

(continued...)

On the other hand, a large number of those who oppose the general CMRS cap support a cap that treats SMR operators similarly to cellular and PCS licensees.[465]

243. The most extensive discussion and analysis was submitted by AirTouch, which argues that the competitive concerns raised in the *Further Notice* are not applicable to the CMRS industry.[466] AirTouch suggests that the actual impact of spectrum caps is likely to be contrary to Commission goals: incumbent firms may be precluded from taking advantage of their expertise and pursuing promising opportunities if their entry into new services would require more spectrum than the cap would allow.[467] They also claim imposing rigid firm-size limits and reserving CMRS "space" for inefficient or non-innovative providers is counterproductive and even anticompetitive.[468] In any event, AirTouch contends, the preferred approach to anticompetitive concerns is to review all acquisitions and transfers of spectrum on a case-by-case basis, not to prejudge the competitive effects of all spectrum aggregations on the basis of a single factor.[469]

244. AirTouch has submitted two economic studies in support of its views, one by Professor Jerry Hausman, and a second by Professor R. Preston McAfee and Dr. Michael A. Williams. Both conclude that the proposed overall CMRS spectrum cap is likely to harm consumers by penalizing low-cost, efficient providers of wireless services and harming providers of innovative wireless service.[470] Both also conclude that it would be appropriate to include SMR providers in a cap because they claim that cellular, PCS and SMR are in the same relevant market and cellular and PCS are already subject to caps.

245. The Hausman study discounts concerns of anticompetitive behavior on the grounds that the unilateral exercise of market power is unlikely in CMRS. According to Hausman, CMRS is characterized by large fixed costs and small marginal costs that, combined with spectrum expansion technology, permit firms to increase their supply

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[464](...continued)
3-4; Southwestern Bell Comments at 4-9; TRW Comments at 1-2. Identical comments opposing spectrum caps were filed by Celpage, Metrocall, Network, and RAM Tech.

[465] *See, e.g.*, AirTouch Comments at 7; APC Comments at 2; Bell Atlantic Comments at 10; McCaw Comments at 18; New Par Comments at 17; NYNEX Comments at 6; RMR Comments at 14; Sprint Comments at 3.

[466] AirTouch Comments at 6.

[467] *Id.* at 9-10.

[468] *Id.* at 15.

[469] *Id.* at 13.

[470] *Id.*, Attachment I (Hausman) at 10-12; Attachment II (McAfee, Williams) at 11.

profitably if a competitor attempts to limit its output.[471] Hausman points to the evidence of market entry by wide-area SMRs and potential PCS entrants to demonstrate that foreclosure will not occur in CMRS markets.[472]

246. The McAfee-Williams study points out that the proposed 40 MHz cap results in a maximum possible share of only 23 percent of a relevant market defined to include cellular and broadband PCS, and even smaller shares under broader market definitions, including, for example, wide-area SMR.[473] The study states that it is not unusual for the leading firm in an industry to have a market share above 23 percent and that antitrust agencies in recent years have approved many transactions when the proposed merger would create a firm with a share in excess of 23 percent.[474] In the authors' view, "there is no basis for making telecommunications uniquely subject to a market share *per se* rule to block spectrum aggregation."[475]

247. Many of the other comments also suggest that we follow a case-by-case approach to assessing the extent of spectrum aggregation that will be permitted, either in the case of spectrum licensing or in considering acquisitions or mergers of licensees.[476] They claim this approach would be more consistent with the approach applied generally to firms in the economy under the antitrust laws. The *1992 Merger Guidelines* set varying levels of scrutiny for mergers and acquisitions based on the level of concentration in the relevant market, but do not fix absolute limits on the size or market share of the merged company. In this regard, it is worth noting that the *Merger Guidelines* define a market with four firms each having 23 percent share as "highly concentrated."[477] In addition to market shares, the Guidelines

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[471] *Id.*, Hausman at 8.

[472] *Id.*, Hausman at 9.

[473] *Id.*, McAfee, Williams at 7-8. It is worth noting that the 23 percent share is of an input, the spectrum, rather than a measure of output (*e.g.*, service revenues). The latter is the standard way to measure market share. A firm could potentially have a revenue market share greater than 23 percent by using its spectrum more intensively than its rivals.

[474] *Id.*, McAfee, Williams at 8.

[475] *Id.*

[476] *See, e.g.*, BellSouth Comments at 11.

[477] The HHI would be above 2100 and the Guidelines say that an industry with an HHI above 1800 is considered highly concentrated. *See 1992 Merger Guidelines* at § 1.51(c), *reprinted in* 4 Trade Reg. Rep. (CCH) ¶ 13,104 at 20,573-6.

permit consideration of other factors that pertain to competitive effects on a case-by-case basis.[478]

**b. Discussion**

248. Notwithstanding the objections contained in the comments, we believe that a broad based spectrum cap is called for. By instituting a cap that allows for what we and the majority of industry commenters in our PCS proceeding view as significant aggregation, we can add certainty to the marketplace without sacrificing the benefits of pro-competitive and efficiency-enhancing aggregation. We previously instituted spectrum caps for specific CMRS services[479] and have now proposed a more general aggregation limit to promote competition and prevent the exercise of market power. If firms were to aggregate sufficient amounts of spectrum, it is possible that they could unilaterally or in combination exclude efficient competitors, reduce the quantity of service available to the public, and increase prices to the detriment of consumers. We believe that the imposition of a cap on the amount of spectrum a single entity can control in an area will limit the ability to increase prices artificially. The lack of a spectrum cap could undermine other goals of the Budget Act, such as the avoidance of excessive concentration of licenses and the dissemination of licenses among a wide variety of applicants.

249. We disagree with AirTouch's assertion that we are reserving space for inefficient providers. A spectrum cap will not limit the market share that can be obtained by any single firm. Market forces will determine the market share of each firm with the more efficient firms acquiring higher market shares. Moreover, a broad spectrum cap does not diminish the incentives to develop innovations that use spectrum more efficiently. Indeed, an innovation that increases spectrum efficiency will allow a firm to raise its share of traffic without having to increase its share of the spectrum utilized to carry that traffic.

250. A cap is a bright line test that provides entities who are making acquisitions with greater assurance than a case-by-case approach that if they fall under the cap, the Commission will approve the acquisition. The cap is particularly useful to entities

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[478] Other things being equal, market concentration affects the likelihood that one firm, or a small group of firms, could successfully exercise market power . . . . However, market share and concentration data provide only the starting point for analyzing the competitive impact of a merger. Before determining whether to challenge a merger, the Agency also will assess the other market factors that pertain to competitive effects, as well as entry, efficiencies and failure.

*Id.* at § 2.0, *reprinted in* 4 Trade Reg. Rep. (CCH) ¶ 13,104 at 20,573-6.

[479] The maximum amount of cellular spectrum is 25 MHz (1 license) and the maximum amount of PCS spectrum an entity may hold is 40 MHz. We have also restricted entities to holding three narrowband PCS licenses.

formulating strategies and lining up financing in anticipation of the broadband PCS auctions. The bright line test also eases the administrative burden on the Commission.

251. Our goal in setting a cap is to discourage anticompetitive behavior while at the same time maintaining incentives for innovation and efficiency. The objections to a cap advanced in the comments do not quarrel with this goal. Rather, the commenters express concern that the caps will be set too low or will cover too many services, with the result that carriers will be barred from taking advantage of efficiencies that additional spectrum would offer. If a cap is set high enough, or only restricts acquisitions in limited segments of the spectrum, the risk of efficiency losses will be reduced. We think that the imposition of a properly designed cap will not cause the harm to competition alleged by the commenters. Indeed, in some contexts, commenters agree with us because, while objecting to an overall cap, some state that existing caps should be broadened to include SMR licensees. As discussed above, we think that setting a cap furthers the public interest by promoting competition in CMRS services, allowing review of CMRS acquisitions in an administratively simple manner, and lending certainty to the marketplace.

### 2. *Scope of Spectrum Cap*

#### a. Background and Pleadings

252. Having determined that spectrum caps can be on balance beneficial, we need to determine which radio services belong under a more general spectrum cap. Earlier in this Report and Order, we determined that all CMRS services should be considered as currently or potentially competing with one another. We examined in the "substantially similar services" section which services would or could compete with each other now and in the future so that we could develop a consistent regulatory system that would not impede competition. In this section, our concerns are somewhat different. Here, our focus on the ability of a single competitor or group of competitors to control sufficient spectrum so that they could reduce the amount of service available to the public and increase prices for a service or group of services encompassed by CMRS. Using a frame of reference fully consistent with that of our earlier analysis, we conclude that, although CMRS contains many radio services, a cap limited to a subset of services with significant (more than 5 MHz[480])

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[480] Although a broadband mobile telecommunications provider is always capable of offering narrowband services, and narrowband service providers can provide some competition to broadband service providers, a large amount of spectrum is beneficial for providing mobile telephone service. Based on the evidence presented in the PCS proceeding, we believe that a cellular carrier or PCS provider would have a cost advantage over a licensee with significantly less than 5 MHz of spectrum. *See, e.g.*, FCC, Transcripts of PCS Public Forum, Apr. 11-12, 1994, at 439 (statement of M. Roberts). *See also Broadband PCS Order*. 8 FCC Rcd at 7724 (para. 55). On the other hand, we also believe that a licensee with 10 MHz of unencumbered spectrum should be capable of offering services comparable to those now provided by cellular systems. *See Broadband PCS Reconsideration Order* at

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bandwidth will achieve the same goals as an overall cap, will not unreasonably distort acquisition or competitive decisions, will help promote competitive parity, and will ease administrative burdens.

253. Many commenters chose to frame their discussion of the "scope of the cap" in terms of a narrow relevant market analysis. For example, in AirTouch's view, CMRS services like paging and satellite services do not compete with broadband services and thus CMRS does not constitute a single relevant market.[481] Moreover, they argue the demand characteristics and supply factors that will determine which CMRS services will compete with each other are not known. They claim the imposition of global limits over ownership of all CMRS spectrum would be without basis. AirTouch asserts such limits would dictate the number and size of providers for all CMRS services before it becomes clear how factors such as economies of scale and scope will relate to efficiency and incentives to innovate and would be short-sighted, risky, and unwarranted.[482]

254. Commenters generally contend that broadband services -- cellular, PCS, and wide-area SMR -- will compete with one another, but argue that narrowband paging and PCS services are not likely to be in the same market as broadband CMRS services.[483] The commenters supporting a spectrum cap argue that such a cap would recognize that SMRs will compete with cellular. APC supports a spectrum cap of 40 MHz of cellular, PCS, or SMR spectrum in any geographic area, which it says would make "the valuable recognition that ESMR [wide-area SMR] carriers will compete effectively with both cellular and PCS."[484] New Par similarly argues that "[a] CMRS spectrum cap is necessary to achieve regulatory parity in light of the Commission's decision to impose spectrum aggregation limits on PCS and PCS-cellular aggregation."[485] It proposes a 35 MHz cap, the same limit currently set for cellular carriers, that would include all types of cellular-like service, including two-way 220-222 MHz operators, Part 90 licensees, and SMR providers. Sprint says it is not clear that

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para. 60. *See also* Petition for Reconsideration of CTIA, *Broadband PCS Order*, at 3; Petition for Reconsideration of Nextel, *Broadband PCS Order*, at 5-8.

[481] AirTouch Comments, Hausman at 6. Professor Hausman asserts that cellular and paging are in different product markets, because a price increase in one service would not cause enough customers to shift to the other service to defeat the price increase. He also asserts that other CMRS services are in separate markets.

[482] *Id.* at 8-9.

[483] *See, e.g.*, APC Comments at 3; Comcast Comments at 4-6; Nextel Comments at 28; PageNet Comments at 48.

[484] APC Comments at 2.

[485] New Par Comments at 15.

there should be one cap, but that any cap should apply to services that are substantially similar to one another, including cellular, broadband PCS, and wide-area SMR.[486]

255. McCaw says that considerations of regulatory parity and a "level playing field" dictate that SMR operators be subject to the same limits applied to cellular licensees seeking PCS licenses, to ensure that no entity gains a competitive advantage merely by finding a loophole that can be used to the competitive detriment of others.[487]

256. E.F. Johnson also strongly favors the cap, both to accord similar treatment to services that are substantially similar and to foster ownership opportunities for small, local providers.[488] Rural Cellular requests that any cap that is adopted should not apply to rural telephone companies. Because rural companies are the only likely providers of CMRS services in rural areas, RCA reasons that a cap might effectively deprive rural areas of essential radio-based services.[489]

257. In contrast, Nextel says that wide-area SMRs at present serve fewer than 5,000 customers and are too new and too small to have the capability of behaving anticompetitively.[490] They claim the number of prospective providers will assure that licensees will service all possible markets and market niches. Under these circumstances, Nextel contends, a general spectrum cap for other than cellular carriers is not justifiable on

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[486] Sprint Comments at 2.

[487] McCaw Comments at 18. *Accord* Southwestern Bell Comments at 17 ("to facilitate regulatory parity the FCC should impose the same eligibility rules on [SMR] providers which seek PCS licenses as those rules imposed on cellular providers."); AirTouch Comments at 16 ("[ SMRs] compete directly with cellular service and must, as a matter of equitable regulation, be included in any caps that are applicable to cellular providers.").

[488] E.F. Johnson Comments at 19. Two commenters propose limits on the number of channels that wide-area SMRs may accumulate. Southern proposes that the Commission limit frequencies to the number needed for realizing scale economies. It submits a study that concludes that, in a large metropolitan area, digital cellular economies are not significant above 140 channels, about half of those available. Southern Comments at 14-17 and Attachment. Brown supports limiting the number of channels any wide-area SMR may hold to the number which will permit three systems in the market along with room for growth by other currently authorized SMR systems. Brown Comments at 16-19. These proposals represent requests for revising rules and policies for wide-area SMRs that we consider beyond the scope of this proceeding.

[489] Rural Cellular Comments at 5. As we have stated in the *Broadband PCS Reconsideration Order*, we do not believe that we need to make an exception to the spectrum cap for rural areas. If demand requires more spectrum than the caps, we feel that customers will be better served through competition than by a single provider. *Broadband PCS Reconsideration Order,* at para. 66.

[490] Nextel Comments at 27.

any empirically-demonstrable economic or antitrust basis.[491] It describes the cap as "an unwarranted sledgehammer approach to constrain nonexistent market power."[492]

**b. Discussion**

258. We believe that our goal of preventing anticompetitive outcomes can be accomplished by creating a cap on PCS, SMR and cellular licensees. The purpose of the cap is to prevent licensees from artificially withholding capacity from the market. The aggregation of spectrum measures the ability to withhold capacity from the market. PCS, cellular and SMR account for 189 MHz of the approximately 205 MHz of spectrum available for terrestrial CMRS.[493] In most of the other services, the ability to aggregate spectrum is limited, so that capping the aggregation within cellular, SMR and PCS will be sufficient to prevent excessive aggregation.

259. Clearly, broadband PCS and cellular belong in any broad spectrum cap. These are the two mobile radio services with the most spectrum, totalling 170 MHz. There is already a cap on the amount of PCS spectrum that a cellular licensee may hold. Without a spectrum cap, entities in these two radio services have the potential to limit entry by other broadband service providers. The third radio service that has this potential is the SMR Service.

260. The effect of permitting unlimited aggregation of SMR and PCS spectrum could be an increase in the concentration of spectrum available for cellular-type services and a reduction in the number of potential providers, thus diminishing opportunity for more diverse ownership of mobile wireless spectrum.[494] This could undermine other goals of the Budget Act, such as the avoidance of excessive concentration of licenses and the dissemination of licenses among a wide variety of applicants.[495] It might also tend to reduce the incentives of SMR operators to act vigorously to make efficient use of both their SMR and PCS spectrum allocations.

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[491] Nextel Comments at 26-27.

[492] *Id.* at 28.

[493] In addition to PCS, cellular, and SMR, excluding air-to-ground, there are 4.6 MHz of spectrum for non-cellular terrestrial Part 22 CMRS services, and 9.88 MHz of CMRS spectrum under Part 90. *See Further Notice*, 9 FCC Rcd at 2881 (para. 86 nn. 165 & 166).

[494] Once again, it is important to note that the Commission is not predetermining the market share outcomes. A cap is merely a means for the Commission to set the stage to maximize competition.

[495] *See* Conference Report at 482.

261. We reject arguments for not including SMR spectrum within the cap. While current SMRs may at present have low market penetration, the SMR technology holds the potential to permit SMR operators to offer services that are nearly identical to those offered by both cellular and broadband PCS. An entity controlling both SMR and PCS spectrum might use all their spectrum to take advantage of economies of scale and scope, which would be in the public interest. It is also possible, however, that they might seek to accumulate spectrum in order to limit entry by other providers and gain a headstart over their cellular competitors and other new entrants moving into PCS.

262. We also are unconvinced that the current small market presence of SMR operators, relative to cellular carriers, warrants preferential treatment. In the first place, it is far from certain that SMRs will remain small. As discussed in the prior section defining substantially similar services, we are instituting forward-looking regulations. The 19 MHz allocated to SMRs is a substantial amount of spectrum. While SMR companies have a relatively small market presence compared to cellular carriers, they may become more important players in the future.[496] In addition, while SMRs currently may not have as advantageous a market position as cellular carriers who have established systems and a base of customers, in the absence of any restrictions on their aggregation of broadband spectrum SMRs would enjoy a unique advantage in relation to all other potential bidders. They would be the only entities with the opportunity to accumulate more than 45 MHz of broadband spectrum. They would in fact be in a more favorable position in this important respect than the designated entities, who were awarded an express statutory preference in bidding for PCS spectrum. Adopting consistent restrictions on spectrum aggregation for PCS, cellular, and SMR will help establish a level playing field for participants in our competitive bidding proceedings, and help give free play to market forces.

263. We are therefore instituting a 45 MHz aggregate spectrum cap on CMRS uses within three radio services: broadband PCS, cellular and SMR. This cap supplements the caps adopted for cellular service and for PCS (*i.e.*, those caps may not be exceeded either).[497] As a result, an entity can hold up to 45 MHz of spectrum in the three services in any geographic area. For example, an entity can hold a cellular license accounting for 25 MHz, a 10 MHz PCS license and 10 MHz worth of SMR spectrum in the same area. Although we recognize that our service specific limits of 40 MHz for PCS and cellular are lower, we conclude that 45 MHz is an appropriate overall limit for several reasons: this restriction will allow small SMR operators (those with less than 5 MHz) to acquire both a 30 MHz and a 10 MHz PCS license in the same area. In addition, it will prevent excessive concentration of licenses by a single carrier, but it will enable PCS and cellular operators

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[496] L. Runyon & S. Birch, SMR IN THE UNITED STATES: A WINDOW OF OPPORTUNITY 7-8 (Oct. 1993)(Merrill Lynch publication); "Nextel To Buy Wireless Competitor," Washington Post, Aug. 6, 1994, at D1.

[497] *Broadband PCS Reconsideration Order*, at paras. 66-68.

with 40 MHz of spectrum to obtain additional spectrum so they have incentives to offer other services to take advantage of new innovation or economies of scale and scope.

264. The 45 MHz cap in conjunction with our service specific limits for PCS and cellular will help ensure diversity in the provision of high capacity, wide-area land mobile radio service. These restrictions should generally ensure the opportunity for three new PCS providers in every major market in addition to the current providers.[498] In addition, we will continue to have a large number of providers of other CMRS services including paging, narrowband PCS and various Part 90 radio services. Furthermore, this action is consistent with the intent of Congress insofar as it establishes effective parity in the eligibility requirements for cellular and wide-area SMRs for PCS spectrum. This cap, for the most part, does not limit the number of additional SMR channels an SMR operator might acquire, nor exclude them from participation in PCS (although it might limit them to a 30 MHz license). Thus, the fears of some SMR operators commenting in this proceeding[499] concerning lost efficiency from inclusion in a spectrum cap are unfounded.

265. Finally, we are not adopting a different cap for rural service providers. We conclude that the demand characteristics in those areas do not present any need for aggregation beyond the limits we have set. If, as some petitioners have stated, demand in these rural areas will require more spectrum, the public interest will be better served by having additional competitive service providers. Petitioners have not shown that the economies of scale and scope are so different in rural areas that they justify an exception that allows a single provider to acquire a large amount of spectrum.

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[498] There should be a minimum of three PCS providers in each area, since we have adopted a service specific limit of 40 MHz and have allocated 120 MHz of PCS spectrum. Even if an incumbent SMR provider buys one of the 30 MHz licenses, there will still be a minimum of three new providers in the market.

[499] *See* OneComm Reply Comments at 13-14; Comcast Reply Comments at 6-7.

*c. Services Excluded from Cap*

**a. Narrowband Radio Services**

**(1) *Pleadings***

266. New Par would exclude narrowband PCS and paging from the cap, because New Par does not anticipate that these services will compete with one another.[500] AirTouch also agrees that paging services should not be included in the cap.[501] Others also agree that narrowband paging and PCS services are not likely to be in the same market as broadband CMRS services.[502]

**(2) *Discussion***

267. We have decided to exclude all terrestrial narrowband radio services from the cap. These services total less than 10 percent of the 189 MHz covered by our terrestrial broadband spectrum cap. Channels in the largest block of the narrowband services, business radio in the 450-470 MHz band, are shared in each geographic market by many licensees. Of the approximately 10 MHz of spectrum for narrowband terrestrial services where we have provisions for channel exclusivity, it is highly unlikely that one entity could ever accumulate as much as 5 MHz in any given geographic market. In addition to factors such as the cost of obtaining dozens of licenses per geographic market, there already are regulatory safeguards, including intra-service caps for most of these services. Thus, there is little risk that an entity could use narrowband allocations to exert undue market power over CMRS as a whole. In addition, the services provided by the narrowband radio service licensees can, for the most part, be provided by the licensees subject to the cap.

**b. Satellite Services**

**(1) *Pleadings***

268. Commenters addressing satellite service assert that it is more likely to be complementary to, not competitive with, broadband service because it will offer ubiquitous, albeit more expensive, service.[503] They contend it would be premature to adopt spectrum aggregation rules for satellite while issues of how much spectrum should be awarded and

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[500] New Par Comments at 16.

[501] AirTouch Comments at 7-8.

[502] *See, e.g.*, APC Comments at 3; Comcast Comments at 4-6; Nextel Comments at 28; PageNet Comments at 48.

[503] *See* Comsat Reply Comments at 2-3.

how it should be divided are pending.[504] They also point out Mobile Satellite Service (MSS) providers typically share spectrum with other service providers.[505] AMSC states that the nature of satellite systems does not permit the same frequency reuse as is possible with a terrestrial system.[506] Thus, a MHz of satellite spectrum provides far less capacity in a given market than a MHz for terrestrial radio services. Commenters also cite differences between MSS and terrestrial services with regard to spectrum use, international coordination, geographic coverage, shared spectrum and target market.[507]

**(2) *Discussion***

269. We agree that there are significant differences and open questions. Hence, we will exclude MSS from this cap, even though, as proposed, a licensee in that service can obtain more than 5 MHz. The equivalent yield (capacity per geographic market) of a given amount spectrum used for terrestrial-based and satellite-based technology is very different, making it unreasonable to equate relative spectrum usage for purposes of determining a spectrum aggregation limit. Currently, providers of MSS expect to serve as a complement to terrestrial services for the most part since their service will be relatively expensive and therefore generally will not be a constraining factor on the price of terrestrial services. Moreover, MSS services are subject to international coordination and allocation considerations that distinguish them from terrestrial CMRS.

***4. Implementation Issues***

**a. Maximum Attributable SMR Spectrum**

**(1) *Pleadings***

270. Nextel claims that equating SMR and cellular spectrum would not achieve regulatory parity because of important differences in the way spectrum is licensed. For example, SMRs are assigned either one or five 25 kHz channels at a time. Their licensee service areas are station-based, defined by the characteristics of each individual base station, thus requiring the linking of these stations through overlapping coverage to approximate the geographic area in which a cellular licensee obtains an exclusive spectrum assignment. Co-licensees are entitled to co-channel interference protection, which is said to preclude wide-area SMR licensees from using all of their channels in a portion of the market. Taken

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[504] Constellation Comments at 23; LQP Comments at 2; Motorola Comments at 8; TRW Comments at 2; APC Comments at 2.

[505] *See* Comsat Reply Comments at 3.

[506] AMSC Comments at 9.

[507] *See, e.g.*, LQP Comments at 4-6.